

Amendments to the Specification:

Please replace the paragraph beginning at page 4, line 15, with the following rewritten paragraph:

Fig. 1 is a ~~perspective~~ side view of the spinal fusion implant of this invention in the insertion mode;

Fig. 2 is a side view ~~an exploded perspective~~ of the spinal fusion device in the increased height mode;

Fig. 3 is a ~~side~~ perspective view of the upper section of the implant in the insertion mode; and

Fig. 4 is a ~~side~~ perspective view of the lower section of the implant in the increased height mode.

Please replace the paragraph beginning at page 5, line 2, with the following rewritten paragraph:

The spinal fusion device 10 is inserted in the intervertebral space in the insertion mode, shown in Fig. ~~[[3]]~~ 1, to replace damaged, missing or excised disk material. This extended position allows the implant to be inserted in a small intervertebral space without the necessity of excising structurally sound bone. The upper section 11 has a top surface 12 for engaging the end plate of a vertebra and the lower section 13 has a bottom surface 14 for engaging the end plate of an adjacent vertebra. The top surface 12 and the bottom surface 14 are planar to provide a large contact area with each vertebra. Each contact surface has a roughened

finish to provide better purchase on the end plates of the vertebrae. As shown, the top and bottom surfaces have a series of lands and grooves 15, 16, 17 and 18 though other stippled treatment may be employed. Of course, the device may be rotated about its longitudinal axis 180 degrees so that the upper section becomes the lower section and vice versa.

Please replace the paragraph beginning at page 5, line 19, with the following rewritten paragraph:

The device 10 has two extreme positions and is adjustable infinitely between those positions, eg., in the insertion mode the extended position of the structure has a height 20 approximately the same as the height of one of the sections and a length approximately twice the length of one section, as shown in Fig. 1. In the increased height mode, the expanded position, shown in Fig. ~~2~~ ~~1~~ and Fig. 4, the height 19 is the sum of the height of the individual sections and the length is approximately the same as the length of a section.

Please replace the paragraph beginning at page 6, line 11, with the following rewritten paragraph:

The upper section 11 is formed with an end wall 21 a top surface 12 and depending sidewalls 22 and 23. The sidewalls terminate in an inclined plane 24 which extends from the end wall

21 to the top surface 12. ~~In one embodiment, the inclined plane 24~~
~~has a stop 50 formed as a groove 52 in one plane and a~~
~~corresponding ridge 51 in the other plane. The stop gives a~~
~~tactile signal to the surgeon that the sections are in the optimal~~
~~position.~~ The top surface 12 has a large aperture 25 therethrough
to provide for bone ingrowth. The top surface 12 has a narrower
flange 26 extending beyond the sidewalls 22 and 23. The flange 26
engages the end wall of the lower section 13 to guide the relative
movement of the sections maintaining the upstanding sidewalls and
the depending sidewalls in alignment. The end wall 21 has a bore
27 with internal threads 28 to cooperate with the threads 41 on the
link 40. The bore may be a blind bore or extend through the end
wall 21.

Please replace the paragraph beginning at page 7, line 3, with
the following rewritten paragraph:

The bottom surface 14 of the lower section 13 has a large
aperture 30, as shown in Fig. ~~[[2]]~~ 4, to facilitate bone ingrowth
after implantation. The lower section 13 is a U-shaped channel
with opposed upstanding sidewalls 31 and 32 projecting from the
bottom surface. The side walls 31 and 32 have a short end 33 and a
long end 34. The sidewalls 31 and 32 terminate in an inclined
plane extending from the short end 33 toward the long end 34. The
upstanding walls each have a vertical extension 35 and 36 beyond

the end of the inclined plane. A reduced thickness 37 is formed in the vertical extensions 35 and 36 to accommodate the flange 26 as the upper and lower sections move relative to each other. The movement of the flange through the reduced thickness contributes to the alignment of the upper and lower sections as they move relative to each other.

Please replace the paragraph beginning at page 8, line 2, with the following rewritten paragraph:

A distractor 42 is shown in Fig. 2. The distractor 42 is dimensioned to be inserted into the interior cavity between the upper section and the lower section of the spinal infusion device 10, as shown in Fig. 1. A plug 43 is dimensioned to be inserted and closes the opening formed in the lower section by the upstanding sidewalls 31, 32 (Fig. 4). The upper surface of the plug has an inclined ramp 44 on each side (only one side shown in Fig. 2) to accommodate the inclined plane 24 of the depending walls 22 and 23 of the upper section. The plug 43 has a larger circumferential end plate 45 dimensioned to extend to the outer periphery of the upper and lower sections to make a smooth outer surface. The upper portion 46 of the end plate 45 engages the end of the flange 26 to act as a stop for relative movement. Extending from the end plug into the cavity of the hollow structure 10 is the body 47 of the distractor 42. The body is connected to the end

plug by two rails ~~48 and 49~~ (not shown) leaving ~~[[the]]~~ a central area ~~[[60]]~~ open for bone ingrowth. The end plug 43 and the body 47 each have a bore 61 and 62, respectively. These bores are aligned with the bore 27 in the end wall of the upper section 11, as shown in Fig. ~~[[1]]~~ 2. The bore 61 has a larger countersunk bore 63 in the end plate 45 (Fig. 1).

Please replace the paragraph beginning at page 8, line 23, with the following rewritten paragraph:

As shown in Fig. ~~[[3]]~~ 1, the spinal fusion device is inserted in the disk space between adjacent vertebrae in the extended position with the top surface in contact with the end plate of one vertebra and the bottom surface in contact with the end plate of an adjacent vertebra. A link 40 traverses the bores 61, 62 and is threaded in bore 27. The surgeon turns the link 40 causing the upper and lower sections to move along the complementary inclined plane to shorten the fusion device and increase the distance between the end plates of the adjacent vertebrae. The adjustment may continue until the flange 26 contacts the end plate 46. At this time, the link may be removed and replaced by a bolt of sufficient length to tighten the upper and lower sections together.

While a threaded link and bore are illustrated for adjusting the device, other mechanisms may be used for generating the force to move the sections. For example, a pneumatic, hydraulic or

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mechanical puller may be used against the end plate to apply linear force to the link rather than torque. And the end wall may have a nipple rather than a bore.